ACC.14
TCT@ACC-i2 | innovation in intervention

A1544
JACC April 1, 2014
Volume 63, Issue 12

Stable Ischemic Heart Disease

IMPACT OF RENAL INSUFFICIENCY ON LEFT MAIN CORONARY ARTERY DISEASE AND CARDIOVASCULAR EVENTS IN PATIENTS WITH STABLE ANGINA PECTORIS

Poster Contributions
Hall C
Saturday, March 29, 2014, 10:00 a.m.-10:45 a.m.

Session Title: The Roles of Diabetes, Obesity, and Kidney Disease in Stable Atherosclerotic Heart Disease
Abstract Category: 25. Stable Ischemic Heart Disease: Clinical
Presentation Number: 1121-331

Authors: *Kazuhiro Dan, Toru Miyoshi, Hiroshi Ito, Fukuyama City Hospital, Fukuyama, Japan*

Background: Chronic kidney disease(CKD) plays a critical role in pathogenesis of coronary artery disease(CAD). Even though a lot of studies identified risk factors for CAD, factors associated with left main coronary artery disease(LMCAD) remain unclear. We investigated an impact of renal insufficiency on LMCAD in patients with stable angina pectoris(SAP).

Methods: We performed coronary angiogram to 1601 consecutive patients between 2006 and 2009. A total of 626 consecutive SAP patients with significant stenosis and 20 subjects with absolutely normal angiogram as the control group were enrolled. Patients with SAP were divided into two groups; LMCAD(n=95) and non-LMCAD(n=531). Significant stenosis was defined as percent luminal reduction > 50% in left main trunk and > 75% in the other parts. CKD was defined as an estimated glomerular filtration rate(eGFR) <60 ml/min/1.73 m2 prior to angiography. Major adverse cardiovascular events(MACE) was defined such as death, revascularization, admission due to heart failure and stroke. Patients were followed at 2 year after optimal treatment including coronary revascularization and medication.

Results: Among three groups, LMCAD patients had significantly lower eGFR ($p<0.001$ by ANOVA) and higher presence of dyslipidemia ($p=0.02$); however there were no significant differences in other traditional risk factors, polyunsaturated free fatty acid and brain natriuretic peptide. In SAP patients, the presence of LMCAD in patients with CKD was significantly higher than that in patients without CKD(18.5% vs 12.2%, $p=0.03$). Multiple logistic analysis revealed that CKD was independently associated with LMCAD(adjusted odds ratio, 1.74; 95% confidence interval [CI]; 1.09-2.76, $p=0.01$). In patients with LMCAD, MACE in patients with CKD was higher than that in patients without CKD ($p<0.02$ by Kaplan-Meier analysis). The LMCAD patients with CKD had more events compared to the non-LMCAD patients without CKD (hazard ratio 2.45; 95% CI, 1.02 to 5.87, $p<0.01$).

Conclusions: CKD was independently associated with the presence of LMCAD and MACE with LMCAD in SAP patients. Our results suggest that renal insufficiency is a residual risk factor in LMCAD patients.